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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/514,312	02/28/2000	Takahide Kasai	31671-157328RK	8281

26694 7590 02/14/2003

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EXAMINER

DI NOLA BARON, LILIANA

ART UNIT	PAPER NUMBER
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1615

22

DATE MAILED: 02/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/514,312

Applicant(s)

KASAI ET AL.

Examiner

Liliana Di Nola-Baron

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 December 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 45-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 45-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

Receipt of Applicant's request for continued examination and preliminary amendment, filed on December 19, 2002, canceling claims 40-44 and amending the title and the abstract of the instant application, is acknowledged.

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 45-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiguro et al. (U.S. Patent 5,521,089).

The claimed invention is directed to processes for producing a coated material and coated materials produced by said processes.

Ishiguro et al. provides a process for producing microcapsules utilizing yeast cell wall comprising glucan, mannan and chitin (See col. 2, lines 35-60). Ishiguro et al. teaches that the yeast cell wall and their components, specifically glucan, mannan and chitin, can be dissolved by enzymes, and the degree of dissolution can determine the physical strength and/or film characteristics, such as the speed of release from the microcapsule, of the material (See col. 3, line 46 to col. 4, line 14). Ishiguro et al. teaches that the optimal pH for many enzymes is 4-9, thus contemplating an acidic environment, and termination of the reaction can be carried out by

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several methods, including adjustment of pH (See col. 4, lines 15-32). As an alternative method, Ishiguro et al. teaches that the process for producing microcapsules comprises treating yeast cells with alkaline solutions, rather than with enzymes (See col. 3, lines 13-22). Ishiguro et al. teaches that the yeast cell residues may be dispersed in aqueous solutions and may enclose hydrophobic liquids, such as oils, thus contemplating plasticizers, and encapsulation is carried out by mixing hydrophobic liquid with the yeast dispersion in water using an emulsifier, and optionally pH regulators and water-resisting agents (See col. 5, lines 10-62). Ishiguro et al. teaches that the microcapsules are used for cosmetics, medicines, food, feeds and chemicals (See col. 5, lines 36-39).

Thus, Ishiguro et al. provides methods for producing coated materials from yeast cell walls, and microcapsules produced by said processes. Ishiguro et al. does not specifically mention that the microcapsules are impermeable to gasses, however, it teaches that the degree of dissolution of the yeast cell walls can determine the physical strength and/or film characteristics of the compositions of the invention, and it is possible to obtain microcapsules, which are resistant to heat and humidity (See col. 4, lines 4-38).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teachings of Ishiguro et al. to device a process for producing a coated material, and obtain coated materials from the processes of the invention. The expected result would have been a successful method to provide coated materials from yeast cell walls. Because of the teachings of Ishiguro et al., that the degree of dissolution can determine the physical strength and/or film characteristics of the formulations, one of ordinary skill in the art

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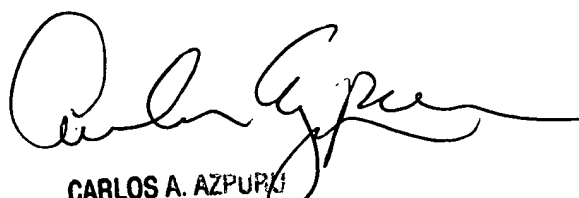
would have a reasonable expectation that the methods and compositions claimed in the instant application would be successful. Therefore the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Liliana Di Nola-Baron whose telephone number is 703-308-8318. The examiner can normally be reached on Monday through Thursday, 5:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K Page can be reached on 703-308-2927. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3592 for regular communications and 703-305-3592 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1234/ 1235.

February 11, 2003

  
CARLOS A. AZPUR  
PRIMARY EXAMINER  
GROUP 150